T. Blanchard,

Mortising Machine.

Patented Aug. 10, 18c

Fig. 2.

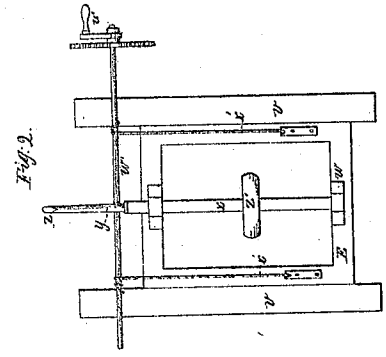
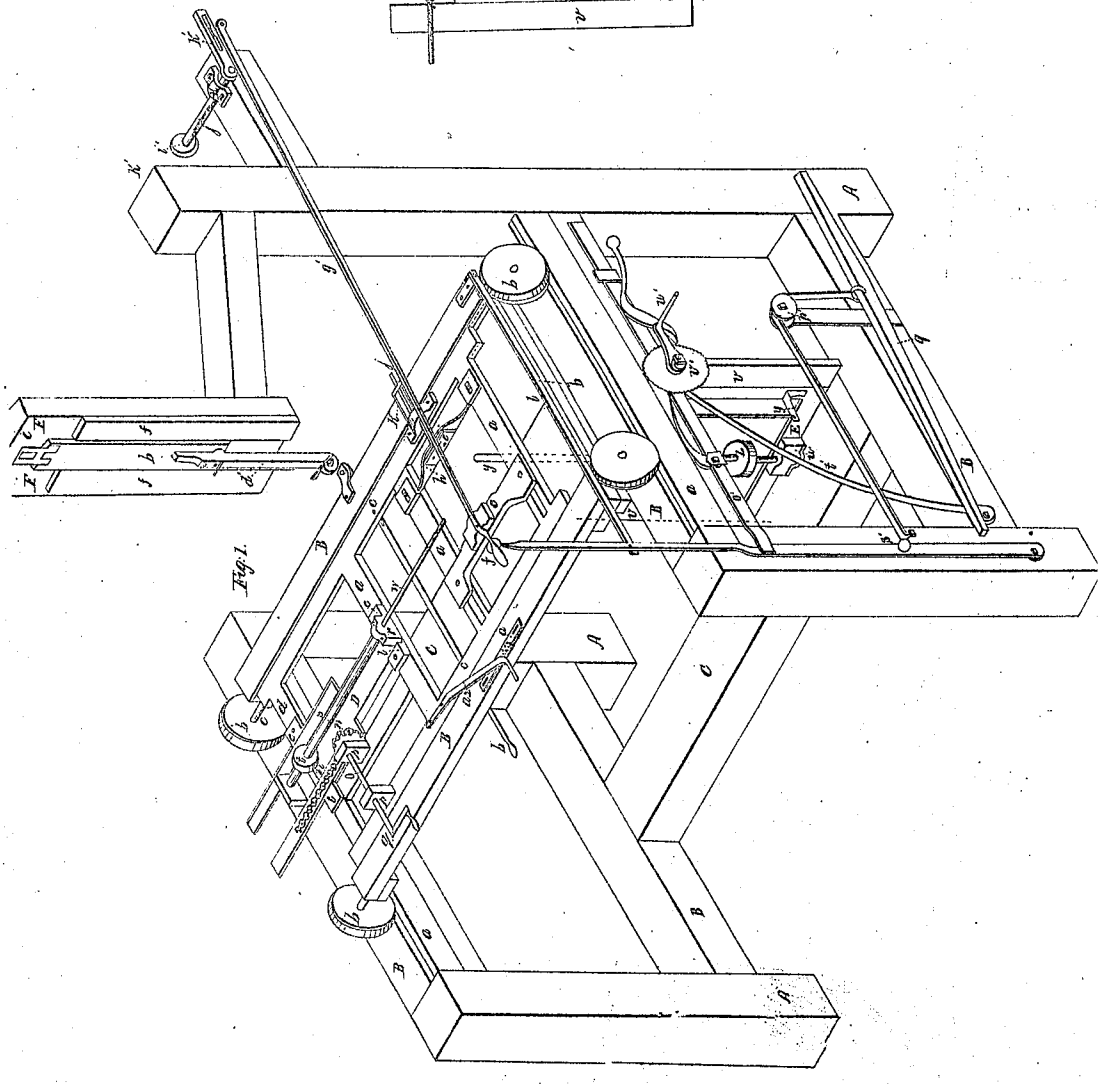


Fig. 1.



AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

THOMAS BLANCHARD, OF NEW YORK, N. Y.

MACHINE FOR MORTISING SOLID WOODEN SHELLS OF SHIPS' TACKLE-BLOCKS.

Specification of Letters Patent No. 5, dated August 10, 1836.

To all whom it may concern:

Be it known that I, THOMAS BLANCHARD, late of Springfield, in the county of Hampden and State of Massachusetts, but now of the city, county, and State of New York, have made and adapted to use certain new and useful improvements in machinery for boring and mortising solid wooden shells of ships' tackle-blocks, which machinery is also applicable to other similar purposes, and which machinery and my improvements and the mode of constructing and using the same are correctly and fully set forth in the following description and in the drawing annexed hereunto and making a part of this specification, wherein Figure 1, is an orthographical projection of the whole machine, and Fig. 2, are representations of certain parts, shown detached for the purpose of more clearly elucidating the same, the same letters, and figures of reference being employed to denote the similar or corresponding part in all the several figures.

A, A, A, A, are four vertical posts, B, B, B, B, are four cross timbers, and C, C, are two lengthwise timbers. These form the standard frame on which the whole of the machinery is fixed for work, and are represented as of wood, but may be made of iron. Upon each of the upper pair of cross frame pieces B, is fixed a metal railway A, A, serving as tracks, and guides for four rollers *b*, *b*, *b*, *b*, having flanges on the inner edges to keep them in place. These rollers carry the two longitudinal arbors *c*, *c*, and upon these arbors the traverse frame B, is mounted so as to be easily moved upon the railway across the machine. The inner longitudinal edges of the frame B, are fitted with a bird beak rebate to receive the outer edges of the interior longitudinal slide frame *c*, in which are four connecting cross bars *d*, *d*, *d*, *d*, the two right hand of these being fitted with slots in the front ends, over these slots is placed the carriage bar *e*, having in it the screw center pivot *f*, with a wide thumb piece for conveniently turning the screw. At the back of the slide frame *c*, is a bearing block *g*, and corresponding with that, and the bar *e*, is the bearer bar *h*, made with flat flanged ends having slots which allow it to be placed at the needful distance, both from the block *g*, and the center bar *e*. The spur plate, and block *i*, are set into the block *g*, so as to overlay, and be supported by the bar *h*, and the position of the spur *i* is regulated by the back center screw *j*, fixed on the stirrup *k*, at the back of the block *g*, on which a small screw fixes the position of the spur *i*, when once regulated for the purposes hereafter described.

On the two bars, *d*, *d*, at the left hand part of the slide-frame C, is a smaller interior slide frame D, retained in place by the four slide pieces *l*, *l*, *l*, *l*, and having a horizontal motion which is directed, and regulated by the tooth rack M, having geared into it the pinion N, set on the arbor O, which is mounted in the bearings *p*, *p*, having the crank handle *q*, at the outer end. Upon the frame D, are fixed the two bearings *r*, *r*, in which the auger mandrel S, is mounted having the drum, or pulley *t*, fitted on it, which may be arranged so as to be connected to a prime mover in any effectual mechanical manner. Upon, or in the nose of the mandril S, is fitted the screw auger U, which may be made to shift so as to fix an auger of any required size. Immediately below the right hand part of the traverse frame B, upon the back part of the two lengthwise timbers C, C, are screwed two vertical slide pieces *v*, *v*, and in these is the vertical slide frame E, having two cross bars on which are fixed the bearing *w*, *w*, so as to receive the vertical mandril, or bit stock *x*, working in a pivot on the lower bearing, and having a socket, or female screw to receive the bit *y*, the shaft of which is solid steel, or good case hardened iron the top being so fitted on one side that the steel cutter *z*, may be put in, and held securely by a screw cut in from the opposite side of the bit, and finished with a countersink flush head, having a notch in the manner of a common wood screw used by carpenters, and when thus finished as shown in the detached Fig. 2, the cutting part of this belt is very similar to the bit technically known by the name of the "spoon bit." Upon the bit stock, or mandrel X, is the drum, or pulley Z^1, fitted to communicate a very rapid rotary motion to the bit *y*, by a belt led in any suitable manner from a first mover. Upon each of the two side part of the vertical slide frame E, are fixed brackets Y^1 each having an eye on the outer end, and through these eyes is rove the cord X^1, the ends of which are connected to the horizontal winch W^1, set in gearings hung under the upper frame piece C, and having the ratchet wheel V^1, and crank handle w^1, on its outer end, the long pawl *t*, being fixed